

From: [Jacobson, Linda](#)
To: [McCarter, Jennifer](#)
Subject: Comanche Station statistical concerns and response to 5-week sampling interval proposal
Date: Thursday, January 27, 2022 8:39:00 AM
Attachments: [Comanche statistics compliance concerns.pdf](#)

Good morning,

I hope this finds you well. I thought I'd check in and see the status of the sampling of the newer wells, whether you would like to discuss the statistical concerns noted in the attachment and whether any measures have been taken to address these, and the schedule and location for the additional wells projected as being installed at the end of February. Thank you.

Linda Jacobson

From: Jacobson, Linda
Sent: Friday, December 10, 2021 4:09 PM
To: McCarter, Jennifer <jennifer.mccarter@xcelenergy.com>
Cc: Kilty, Quinn V <quinn.v.kilty@xcelenergy.com>; Bloomberg, Jon H <Jon.H.Bloomberg@xcelenergy.com>; Churchill, Stephen <Churchill.Stephen@epa.gov>; Figur, Charles (he/him) <Figur.Charles@epa.gov>; jill.parisi <jill.parisi@state.co.us>; Bailley, Treasure <bailley.treasure@epa.gov>; Krueger, Kathryn <Krueger.Kathryn@epa.gov>
Subject: statistical concerns and response to 5-week sampling interval proposal

Hi, Jennifer,

We have reviewed the responses and other information that you provided to the statistical questions that we had. Our concerns are noted in the attachment to this email.

Regarding your proposed sampling interval for the new wells, we looked at the data and it appears that a 5-week sampling interval for the new wells would produce defensible, statistically independent samples, but the final word on the issue will be if the actual data from these wells pass autocorrelation testing after sampling.

Please let me know if you would like me to schedule a short call to discuss either of these topics further. Thank you.

Best regards,

Linda Jacobson

From: McCarter, Jennifer <jennifer.mccarter@xcelenergy.com>
Sent: Friday, November 5, 2021 11:14 AM
To: Pearson, Janice <pearson.janice@epa.gov>
Cc: Figur, Charles <Figur.Charles@epa.gov>; Jacobson, Linda <Jacobson.Linda@epa.gov>; Bailley, Treasure <Bailley.Treasure@epa.gov>; Churchill, Stephen <Churchill.Stephen@epa.gov>; jill.parisi

<jill.parisi@state.co.us>; Bloomberg, Jon H <Jon.H.Bloomberg@xcelenergy.com>; Kilty, Quinn V <quinn.v.kilty@xcelenergy.com>

Subject: FW: Oct 5th EPA call follow up

Please disregard previous transmittal, there was an error in the subject line and cc's. Thank you.

Jennifer McCarter, R.E.M.

Xcel Energy

Environmental Analyst

Environmental Services Department

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I am working remotely. Please contact me through email or cell (720) 810-1220

From: McCarter, Jennifer

Sent: Friday, November 5, 2021 11:09 AM

To: Pearson, Janice <pearson.janice@epa.gov>

Cc: Figur, Charles <Figur.Charles@epa.gov>

Subject: RE: Oct 5th EPA call follow upMuller, Sheldon <Muller.Sheldon@epa.gov>

Ms. Pearson – on behalf of Quinn Kilty, I've attached a letter responding to topics and questions that were discussed during our October 5, 2021 conference call with EPA regarding groundwater monitoring at the Comanche Station bottom ash pond near Pueblo, Colorado, including the proposed new background and downgradient well locations, background monitoring frequency, further evaluation of off-site domestic wells, evaluation of lab versus field pH results and statistical methods and approach. Please let us know if questions arise during staff review and whether a follow up call would be helpful.

Sincerely,

Jennifer McCarter, R.E.M.

Xcel Energy

Environmental Analyst

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I am working remotely. Please contact me through email or cell (720) 810-1220

From: Jacobson, Linda <Jacobson.Linda@epa.gov>

Sent: Friday, October 29, 2021 2:39 PM

To: McCarter, Jennifer <jennifer.mccarter@xcelenergy.com>

Cc: Pearson, Janice <pearson.janice@epa.gov>; Bailley, Treasure <Bailley.Treasure@epa.gov>;

Churchill, Stephen <Churchill.Stephen@epa.gov>; Muller, Sheldon <Muller.Sheldon@epa.gov>;
Figur, Charles <Figur.Charles@epa.gov>; jill.parisi <jill.parisi@state.co.us>; Kilty, Quinn V
<quinn.v.kilty@xcelenergy.com>; Bloomberg, Jon H <Jon.H.Bloomberg@xcelenergy.com>; Clarke,
Roger A <roger.a.clarke@xcelenergy.com>; Reeves, Molly <Molly.Reeves@hdrinc.com>; Seymour,
Megan <megan.seymour@hdrinc.com>; Rohr, Matthew <Matthew.Rohr@hdrinc.com>

Subject: RE: Oct 5th EPA call follow up

EXTERNAL - STOP & THINK before opening links and attachments.

Thank you, Jennifer. Treasure and Steve will lead EPA's review, and we will coordinate with Jill for any state comments.

Take care and have a nice weekend.

From: McCarter, Jennifer <jennifer.mccarter@xcelenergy.com>

Sent: Friday, October 29, 2021 2:05 PM

To: Jacobson, Linda <Jacobson.Linda@epa.gov>

Cc: Pearson, Janice <pearson.janice@epa.gov>; Bailey, Treasure <Bailey.Treasure@epa.gov>;
Churchill, Stephen <Churchill.Stephen@epa.gov>; Muller, Sheldon <Muller.Sheldon@epa.gov>;
Figur, Charles <Figur.Charles@epa.gov>; jill.parisi <jill.parisi@state.co.us>; Kilty, Quinn V
<quinn.v.kilty@xcelenergy.com>; Bloomberg, Jon H <Jon.H.Bloomberg@xcelenergy.com>; Clarke,
Roger A <roger.a.clarke@xcelenergy.com>; Reeves, Molly <Molly.Reeves@hdrinc.com>; Seymour,
Megan <megan.seymour@hdrinc.com>; Rohr, Matthew <Matthew.Rohr@hdrinc.com>

Subject: Oct 5th EPA call follow up

Hi Linda, as a follow up to our discussions with EPA staff on October 5th, I'm sending initial information below regarding the installation of a new background well and new downgradient wells in the weathered shale. We have the driller scheduled to begin November 8th and wanted to get this information to you for your review in advance of drilling. The attached figures show the proposed well locations. We are working on finalizing our responses to the additional topics we discussed on the call and will have that information to you next week; as early as possible but no later than end of the week.

1. New Background Monitoring Well completed in weathered shale

We understand that EPA is concerned that the length of the filter pack at the background well for the Bottom Ash Pond, well W-2A, could potentially influence the groundwater quality collected from that well. Although we believe that W-2A was constructed and sampled such that the groundwater samples are representative of background conditions in the weathered shale, we understand that EPA would prefer that a new background well be installed, and we agree to do so. The new background monitoring well (designated as W-2C), will be installed adjacent to the existing background well W-2A as shown on the attached map. The well will be constructed with the filter pack and screened interval limited to the weathered shale. Well W-2C will serve as a new background well for the Bottom Ash Pond, and MW-3 and MW-5 will continue to serve as background wells for the landfill.

2. Additional downgradient wells completed in weathered shale

PSCo understands that EPA does not consider the shallow colluvial wells at the bottom ash pond to represent groundwater, and therefore that they should not be used to monitor for potential releases from the bottom ash pond. We also understand that EPA recognizes that the conceptual site model (CSM) has evolved as additional wells were installed in 2020. While we believe that the monitoring network is and has been compliant at each phase of the site investigation and CSM development, we discussed in the Comanche Station Groundwater Monitoring Network Certification our intent to install additional wells screened in the weathered shale. We also identified in the monitoring network certification a proposed additional downgradient well at the landfill, based upon the potentiometric surface and groundwater flow direction that was determined after installation of the wells in 2020. The proposed locations of two new downgradient waste boundary wells at the Bottom Ash Pond (W-3B & W-6B) and one new well at the landfill (MW-7) are shown on the attached figures. The proposed locations are downgradient of the CCR units and the wells will be screened in the weathered shale.

After completion and development, PSCo will collect groundwater samples from the new wells at a frequency to be proposed in our follow up submittal next week.

Sincerely,

Jennifer McCarter, R.E.M.

Xcel Energy

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